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VISCOELASTIC PERSONAL CARE COMPOSITION

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(57) Claim

1. A linear viscoelastic personal care composition in the form of hair or skin-treating gel with a pH of 4 to 9 comprising a topically acceptable aqueous vehicle, and, in an amount effective to render the composition linearly viscoelastic, a synthetic linearly viscoelastic cross-linked polymeric thickening agent having in a 1 wt.% aqueous solution an elastic or storage modulus G' and a viscous or loss modulus G'' substantially independent of frequency in an applied frequency range of 0.1 to 100 radians/sec. a G' minimum value of 1.000 dynes/sq.cm which varies less than 1 order of magnitude of its original value, and a ratio of G''/G' ranging from more than 0.05 to less than 1.

16. A method of promoting personal care and hygiene comprising applying to the hair or skin an effective amount of a composition as defined in any one of claims 1 to 6.

19. Use of a synthetic linearly viscoelastic cross-linked polymeric thickening agent to manufacture a personal care composition in the form of a hair or skin treating gel with a pH of 4 to 9 comprising a dermatologically acceptable water/humectant vehicle and a dermatologically acceptable abrasive, said polymeric thickening agent being present in an amount effective to render the composition linearly viscoelastic and having in a 1 wt.% aqueous solution an elastic or storage modulus G' and a viscous or loss modulus G'' substantially independent of frequency at an applied

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frequency range of 0.1 to 100 radians/sec., a G' minimum value of 1.000 dynes/sq.cm. which varies less than 1 order of magnitude of its original value, and a ratio of G''/G' ranging from more than 0.05 to less than 1.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A linear viscoelastic personal care composition in the form of hair or skin-treating gel with a pH of 4 to 9 comprising a topically acceptable aqueous vehicle, and, in an amount effective to render the composition linearly viscoelastic, a synthetic linearly viscoelastic cross-linked polymeric thickening agent having in a 1 wt.% aqueous solution an elastic or storage modulus G' and a viscous or loss modulus G'' substantially independent of frequency in an applied frequency range of 0.1 to 100 radians/sec. a G' minimum value of 1,000 dynes/sq.cm which varies less than 1 order of magnitude of its original value, and a ratio of G''/G' ranging from more than 0.05 to less than 1.
2. A composition according to claim 1 containing by weight, 30 to 98% of water, 0.1% to 5% of a nonionic, anionic or amphoteric surfactant or mixture thereof, and 0.02% to 5% of said polymeric thickening agent containing at least 3% of cross-linking agent.
3. A composition according to claim 1 in the form of a hair setting gel containing, by weight, 60% to 98% of water, 0.01% to 5% of a hair setting polymeric material, 0.1% to 5% of a nonionic, anionic or amphoteric surfactant or mixture thereof and 0.02% to 5% of said polymeric thickening agent containing at least 3% of cross-linking agent.
4. A composition according to claim 1 in the form of a skin lotion gel containing, by weight, 60% to 90% of water, 0.1% to 5% of a nonionic, anionic or amphoteric surfactant or mixture thereof, 5% to 35% of solid emollient material, and 0.02% to 5% of said polymeric thickening agent containing at least 3% of cross-linking agent.
5. A composition according to claim 1 in the form of a moisturizing skin cream gel containing, by weight, 40% to 60% of water, 0.1% to 5% of a nonionic, anionic, or amphoteric surfactant or mixture thereof, 10% to 40% of liquid emollient material, 10 to 30% of solid emollient material, and 0.02% to 5% of said polymeric thickening agent containing at least 3% of cross-linking agent.
6. A composition according to claim 1 in the form of a hand skin cleaner gel containing 50% to 70% of water, 20% to 40% of a liquid organic solvent, 0.1% to 5% of a nonionic, anionic or amphoteric surfactant or mixture thereof, 5% to 20% of a dermatologically acceptable skin abrasive.

